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Introducing a 'Management Reporting Systems' Course into the IS Curriculum --Lessons from the Field

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Introduction

In the Fall semester of 1994 we offered a new 'Management Reporting Systems' (MRS) course as an elective in our MIS program. This paper provides the rationale, educational objectives, and content design for such a course. The discussion then turns to providing information about the actual experience of teaching this course. Questionnaires collected at the end of the course indicated a very positive response from the students. In the Fall semester of 1995 we started to offer this course regularly as an elective to both our undergraduate and graduate students.

The Data Processing Management Association curriculum model (DPMA, 1990) already contains suggested electives such as GDSS/EMS/ESS and DSS/Expert Systems which do address some aspects of management reporting. Therefore, the first part of this paper focuses on the unique educational objectives and the value added that an MRS course can provide.

The second part of the paper presents the course design. The intention is to share the blueprints with other universities and to clarify the nature of the proposed course.

The final part of the paper discusses insights gained through the experience of teaching the course. It also reviews student feedback as reflected in anonymous questionnaires. The positive reactions to the course led us to start offering this course regularly as an elective to both our undergraduate and graduate students.

Course Rationale and Objectives

A primary reason for introducing an MRS course into the IS curriculum is that organizations are struggling with this topic without much success (McKinnon and Bruns, 1992; Millet, 1995). A common theme among speakers at the October 1994 CIO Perspective conference was the "Information Imperative" -- the failure of many organizations "to exploit the wealth of information within their own walls," and the need to focus more on information and less on technology (Stuart, 1995).

A second reason for offering such a course is that graduates from IS education programs are required to contribute significantly to the area of reporting systems. Very frequently, the first assignment that our graduating MIS majors face deals with the maintenance of existing reports or with the design and generation of new ones. This is due to the fact that such "read-only" assignments allow a new programmer/analyst to become familiar with existing file structures and with the work environment without placing undue risk on core update processes.

Existing elective courses such as Decision Support Systems and Executive Information Systems (DSS/EIS) do address aspects of presenting information to managers. However, such courses are typically focused on models and technologies for decision making rather than on the content, processes, and design of management reporting systems. A dedicated course is needed if we expect student to contribute meaningfully in this area.

In order to prepare our students for work in this area, the MRS course should provide the knowledge and skills required to:

Appreciate the importance of MRS

Detect deficiencies and propose improvements to MRS at various organizational functions and levels

Understand and support management reporting needs

Understand contemporary MRS issues and technologies such as Data Mining and Data Warehouses

Use modern report generator software

Course Design

Class time in this course is divided into three major parts. In the first part, lectures introduce conceptual material. Next, case studies, role playing, discussions and guest speakers are used for experiential learning and to reinforce concepts. The third part of class time is spent at the computer lab to introduce hands-on report generator skills.

Software

The main software we use for the course is R&R Report Writer. The vendor, Concentric, Inc., offers special educational pricing that allows universities to acquire the software at a fraction of its regular price. A set of five lab assignments take the students from basic to advanced report generator skills.

Group Project

The group project in this course requires that students analyze a subset of management reports in an actual organization. The students meet with managers who use the reports, study existing file structures, and produce a document presenting observations, recommendations, and report prototypes aimed at improving the current management reporting system.

Diary of Change Ideas

In order to sensitize the students to MRS problems and opportunities, they bring to each class an ongoing list of ideas for improving reporting systems in organizations that they personally know as employees or customers. This proves to be a good source of lively discussions in class. It also offers good material for demonstrating concepts in action.

Management Reporting Cases

Several management reporting cases are assigned during the semester. The cases include realistic file structures for semi-fictitious organizations. The students submit proposals for useful management reports that could be generated from these file structures.

Significant portions of lecture time are spent providing students with techniques, insights, and guidelines for conducting this type of analysis. Our experience shows that introducing the students to a report request template helps them produce thorough and high quality report proposals.

Insights from Teaching the Course

Teaching this course is a lot of fun and a lot of work. It is difficult to find good current text sources for the course since the literature in this area is typically dated (McKeever, 1971; Tufte, 1983, Hughes et. al, 1988). Still, I had to cut out some planned material since the topics proved richer and more challenging than anticipated. I have no doubt at this point that management reporting systems is a topic that deserves and requires the time frame of a full course.

Students find that mastering modern report-generator software is very rewarding. Some students experience difficulties with the more advanced features such as two-pass reports, conditional totals, conditional band lines, and accumulation frequency options for total fields. It was interesting to observe that a few students with strong procedural programming background had a tougher time adapting to non-procedural aspects such as generating totals at multiple levels of aggregation.

The cases and the group project challenged graduate and undergraduate students alike. These assignments require creative integration of technology and business understanding, exercising virtually everything the students have learned and experienced. The task of grading the cases was eased considerably by imposing the use of a report proposal template.

The most rewarding aspect of the course was observing how quickly the students progressed. The difference in quality of results between the first and second case was pronounced, and most of the team projects were very good.

From the very start of the course the students seemed to have realized the importance and wide applicability of the material. Some students where able to apply course material to their work almost immediately. Other students used their new knowledge and skills in internship assignments. Some students told me that discussing the course helped them during job interviews. The overall levels of participation and motivation were very high.

Student Evaluations of the Course

In order to evaluate student reactions to this course, I administered an anonymous questionnaire at the last class meeting. The responses were very positive. All students stated that the course should be offered again and that they would recommend it to other students. The students estimated they spent an average of 7 hours per week on this course outside class time.

Conclusions

The Management Reporting Systems course has now been established as a regular elective with its own course number. We are now offering it to both undergraduate and graduate students once a year. I hope this paper prompts other IS education programs to introduce this course into their IS curricula.

References

References available upon request from the author.